

Appl. No. : 10/624,816
Filed : July 22, 2003

REMARKS

Applicant thanks Examiner Smith and Examiner Manual for an informative in-person interview conducted on March 30, 2006. In response to issues discussed in the interview and the Office Action mailed on January 11, 2006, Applicant respectfully submits the above-listed claims 1-14, 17-19, 22-23, and 29-30 for examination in conjunction with the Request for Continued Examination submitted herewith. Claims 1, 7, 9, 13, 14, and 22 are amended and new claims 29-32 are added herein.

Discussion of Claim Rejections under 35 U.S.C. § 102(b)

Claims 1-13, 14, and 17-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Diethelm (U.S. 4,913,148, hereinafter Diethelm). As discussed in the interview, Applicant traverses these rejections and respectfully submits that Claims 1-13, 14, and 17-19 are allowable over Diethelm as discussed below.

Diethelm does not teach or suggest a method of treating viral infections wherein electrical stimulation is applied via *"first and a second electrodes located on a surface of an electrical stimulation device, wherein the second electrode is configured to define a boundary that surrounds the first electrode"* as recited in claim 1 of the present application. Diethelm does not teach or disclose electrodes on a surface of an electrical stimulation device such that one electrode (e.g., a cathode) is configured to define a boundary that surrounds the other electrode (e.g., an anode).

In fact, Diethelm teaches against this feature by repeatedly stating that the second electrode (cathode) should be placed far away from the first electrode (anode). In col. 1, ln. 49-53, Diethelm states that two conducting electrodes are applied: "an anode" and "a cathode....as far away from the anode as possible." In col. 2, ln. 60-61, Diethelm teaches that "[t]he cathodes are placed at the point of the affected dermatome most distant from the anode." For example, in Figure 3 Diethelm illustrates that none of the cathodes K1, K2, K3 (the second electrode) are configured to surround the contour of the anode G' (the first electrode).

Each of independent Claims 1, 7, 13, 14, and 22 also comprise the feature of electrodes located on a surface of an electrical stimulation device, where a second electrode is configured to define a boundary that surrounds a first electrode. Applicant respectfully submits that because

Appl. No. : 10/624,816
Filed : July 22, 2003

Diethelm fails to teach or suggest at least this feature, Claims 1, 7, 13, 14, and 22 are not anticipated and are in condition for allowance.

After further careful review of Diethelm, Applicant respectfully asserts neither Diethelm or the other cited prior art teach or suggest a method of treating viral infections comprising "*applying alternating periods of AC and DC electrical stimulation to the affected skin or mucosa of a patient*" as recited in independent Claim 9, or "*a circuit configured to supply both AC and DC voltage to said electrodes at voltages of less than or equal to about 20 volts*" as recited in Claim 13. AC (alternating current) is an "electrical current that reverses [direction] periodically" (e.g., whose polarity varies with a period T). *McGraw-Hill Dictionary Of Scientific And Technical Terms, 3rd Edition*. DC (direct current) is "current that flows in one direction" e.g., the direction of the current flow does not change. *Id.* Diethelm only teaches the application of current in the form of monopolar square wave pulses (*see* col. 1, ln. 55-58 and Figure 7). This is a DC signal because the current flows in one direction within each pulse period. Even though Diethelm teaches that the current intensity may be adjusted during treatment, it at most discloses the application of DC electrical stimulation whose current intensity may be adjusted. Diethelm fails to teach the application of alternating current (AC) electrical stimulation.

Moreover, in the circumstance the Examiner were to take the position that the monopolar square wave pulses are AC signals, Diethelm would then only disclose the application of AC electrical stimulation. This is because square wave pulses are the only kind of signals taught in Diethelm, and such signal cannot be both AC and DC signals. Diethelm still fails to disclose "*applying alternating periods of AC and DC electrical stimulation to the affected skin or mucosa of a patient*" and "*a circuit configured to supply both AC and DC voltage to said electrodes at voltages of less than or equal to about 20 volts*" and respectfully submits that because Diethelm fails to teach or suggest these features, Claim 9 and 13 are not anticipated and are in condition for allowance.

Discussion of Claim Rejections under 35 U.S.C. § 103(a)

Claims 22-23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Diethelm in view of Lathrop (US 5,133,352, hereinafter Lathrop). To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *See* M.P.E.P § 2143.03. Neither Diethelm nor Lathrop teaches or suggests the feature "*first and*

Appl. No. : 10/624,816
Filed : July 22, 2003

second electrodes located on a surface of an electrical stimulation device, wherein the second electrode is configured to define a boundary that surrounds the first electrode" as recited in independent Claim 22.

As discussed above, Diethelm does not teach or suggest the feature that "*first and a second electrodes located on a surface of an electrical stimulation device, wherein the second electrode is configured to define a boundary that surrounds the first electrode*" and Lathrop does not teach or suggest the feature either. Lathrop also teaches against this feature by stating that the two electrodes are spaced apart one-half inch to one-and-a-half inches, and describes and illustrates electrodes that are not configured to define a boundary that surrounds another electrode (Figure 1 and col. 6, ln. 56-68). Applicant submits that the Examiner cited Lathrop in support of teaching other features. Therefore, Claim 22 is not anticipated by Diethelm in view of Lathrop and is in condition for allowance.

Dependent Claims

Claims 2-6, 8, 10-12, 17-19, 23, and 29-32 are dependent either directly or indirectly on the above-discussed independent Claims 1, 7, 9, 13, 14, and 22. Applicant respectfully submits that pursuant to 35 U.S.C. § 112, ¶ 4, the dependent claims incorporate by reference all the limitations of the claim to which they refer and include their own patentable features, and are therefore in condition for allowance. Therefore, Applicant respectfully requests the withdrawal of any claim rejections cited for Claims 2-6, 8, 10-12, 17-19, 23, and 29-32 and prompt allowance of the claims.

New Claims 29-32

New dependent claims 29-32 recite the feature that the "*first electrode and said second electrode are in a coaxial configuration*." Support for this feature is illustrated in three example embodiments of the invention as illustrated in FIGS 1, 4, and 5C, which show first and second electrodes located on a surface of an electrical stimulation device, where the second electrode is configured to define a boundary that surrounds the first electrode, and where the first and second electrodes are in a coaxial configuration. Such a configuration is not taught or suggested in the cited prior art, including Diethelm and Lathrop.

Appl. No. : 10/624,816
Filed : July 22, 2003

CONCLUSION

In view of Applicant's amendments to the application and the foregoing remarks, it is respectfully submitted that the present application is in condition for allowance. Should the Examiner have any remaining concerns which might prevent the prompt allowance of the application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Furthermore, any new claims presented above are of course intended to avoid the prior art, but are not intended as replacements or substitutes of any cancelled claims. They are simply additional specific statements of inventive concepts described in the application as originally filed.

If the Examiner has any questions which may be answered by telephone, she is invited to call the undersigned at (619) 687-8610.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: April 11, 2006

By: 

Gregory A. Hermanson
Registration No. 53,018
Attorney of Record
Customer No. 20,995
(619) 235-8550

AMEND

2511352
041006